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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,049	12/07/2000	Shunpei Yamazaki	SEL 232	9973

7590

09/10/2003

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EXAMINER

KEANEY, ELIZABETH MARIE

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 09/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/732,049

Applicant(s)

YAMAZAKI ET AL.

Examiner

Elizabeth Gemmell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Receipt is acknowledged of Amendments filed 2 June 2003.

Claim Objections

Claims 3 and 12 are objected to because of the following informalities:

- Claim 3: The limitation "said second group of wirings" in line 1 has insufficient antecedent basis for this limitation in the claim.
- Claim 12: The limitation "said second group of wirings" in line 2 has insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 3-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Iwaski et al. (US Patent 5,962,959; hereinafter Iwaski).

Re claim 1: Iwaski discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (1);

- a luminous element provided over the first substrate (3R,G,B);
- a current supply line provided over the first substrate and connected with the luminous element (2)
- a second substrate (10);
- a wiring for aiding the current supply line (15), wherein the wiring for aiding the current supply line is provided over the second substrate and connected in parallel to the current supply line (V_C);
- a conductor for electrically connecting the current supply line and the wiring aid for the current supply line (V_D);

Re claim 3: Iwaski discloses a wiring for aiding the current supply line being made of a metallic film selected from the group consisting of copper, silver, gold, aluminum, and nickel, or an alloy film containing as a main component a material selected from the group consisting of copper, silver, gold, aluminum, and nickel (column 5, lines 8-13).

Re claim 4: Iwaski discloses, in figure 1 and throughout the disclosure, the wiring for aiding the current supply line is formed into a layered structure (15,11) made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel (column 5, lines 8-13; column 7, lines 42-45).

Re claim 5: Iwaski discloses, in figure 1, the wiring for aiding the current supply line is formed on the front surface, on a back surface or in the interior thereof.

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and 18
Claims 1,2,6,7,8,12,13,14, rejected under 35 U.S.C. 102(e) as being anticipated by Kubota.

Re claim 1: Kubota discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (7');
- a luminous element provided over the first substrate (column 11, lines 48-54);
- a current supply line provided over the first substrate and connected with the luminous element (3)
- a second substrate (7);
- a wiring for aiding the current supply line (10), wherein the wiring for aiding the current supply line is provided over the second substrate and connected in parallel to the current supply line (12);
- a conductor for electrically connecting the current supply line and the wiring aid for the current supply line (11);

Re claim 2: Kubota discloses the luminous element being an EL element (column 11, line 49).

Re claim 6: Kubota discloses, in figure 1 and throughout the disclosure, a via hole (12) that is covered by the wiring for aiding the current supply line formed in the second substrate.

Re claim 7: Kubota discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (7');
 - a luminous element provided over the first substrate (column 11, lines 48-54);
 - a gate control wiring provided over the first substrate for transmitting a power source signal of a gate driver circuit, a clock signal or a start signal (3);
- a second substrate (7);
 - a gate control auxiliary line provided over the second substrate (10) and connected in parallel to the gate control wiring (12);
 - a conductor for electrically connecting the gate control wiring and the gate control auxiliary line (11);
 - a sealing agent for bonding the first and second substrates together (6,6').

Re claim 8: Kubota discloses the luminous element is an EL element (column 11, lines 48-54).

Re claim 12: Kubota discloses a via hole (12) that is covered by the gate control auxiliary lines is formed in the second substrate.

Re claim 13: Kubota discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (7');
- a luminous element provided over the first substrate (column 11, lines 48-54);
- a current supply line provided over the first substrate and connected with the luminous element (3)
- a second substrate (7);
- a wiring for aiding the current supply line (10), wherein the wiring for aiding the current supply line is provided over the second substrate and connected in parallel to the current supply line (12);
- a conductor for electrically connecting the current supply line and the wiring aid for the current supply line (11);
- a sealing agent for bonding the first and second substrates together (6,6');
- a resin filled in a space between the first and second substrates (8).

Re claim 14: Kubota discloses the luminous element is an EL element (column 11, lines 48-54).

Re claim 18: Kubota discloses a via hole (12) that is covered by the wiring for aiding the current supply line is formed in the second substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki.

Re claim 7: Iwasaki discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (1);
- a luminous element provided over the first substrate (3R,G,B);
- a gate control wiring provided over the first substrate for transmitting a power source signal of a gate drive circuit, a clock signal or a start signal (2);
- a second substrate (10);
- a gate control auxiliary line provided over the second substrate (15) and connected in parallel to the gate control wiring (V_C);

- a conductor for electrically connecting the current supply line and the wiring aid for the current supply line (V_D);

Iwaski fails to disclose a sealing agent for bonding the first substrate and a second substrate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to bond the first and second substrate because by bonding and sealing the substrates together, a vacuum is then produced inside the device. A vacuum inside a light-emitting device is necessary for the device to work properly and effectively.

Re claim 9: Iwaski discloses the gate control auxiliary line being made of a metallic film selected from the group consisting of copper, silver, gold, aluminum, and nickel, or an alloy film containing as a main component a material selected from the group consisting of copper, silver, gold, aluminum, and nickel (column 5, lines 8-13).

Re claim 10: Iwaski discloses, in figure 1 and throughout the disclosure, the gate control auxiliary lines is formed into a layered structure (15,11) made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel (column 5, lines 8-13; column 7, lines 42-45).

Re claim 11: Iwaski discloses, in figure 1, the gate control auxiliary line is formed on the front surface, on a back surface or in the interior thereof.

Claims 13 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwaski in view of Shibata et al. (US Patent 6,353,280; hereinafter Shibata).

Re claim 13: Iwaski discloses, in figure 1 and throughout the disclosure, a light-emitting device, comprising:

- a first substrate (1);
- a luminous element provided over the first substrate (3R,G,B);
- a current supply line provided over the first substrate and connected with the luminous element (2)
- a second substrate (10);
- a wiring for aiding the current supply line (15), wherein the wiring for aiding the current supply line is provided over the second substrate and connected in parallel to the current supply line (V_C);
- a conductor for electrically connecting the current supply line and the wiring aid for the current supply line (V_D);

Iwaski fails to disclose a sealing agent for bonding the first substrate and a second substrate.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to bond the first and second substrate because by bonding and sealing the substrates together, a vacuum is then produced inside the device. A vacuum inside a light-emitting device is necessary for the device to work properly and effectively.

Iwaski further fails to disclose a resin filled space between the first and second substrates. However, Iwaski does disclose a spacer between the two substrates (column 6, line 2).

Shibata discloses a spacer having a coating of resin (column 7, lines 34+).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a spacer having a coating of resin which fills a space between the first and second substrates because the spacers will not have the ability to build up any charge and cause interference with the light-emitting device. Therefore, the brightness and life of the device is significantly improved.

Re claim 15: Iwaski discloses a wiring for aiding the current supply line being made of a metallic film selected from the group consisting of copper, silver, gold, aluminum, and nickel, or an alloy film containing as a main component a material

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selected from the group consisting of copper, silver, gold, aluminum, and nickel (column 5, lines 8-13).

Re claim 16: Iwaski discloses, in figure 1 and throughout the disclosure, the wiring for aiding the current supply line is formed into a layered structure (15,11) made of a metallic film that is made of two or more different elements selected from copper, silver, gold, aluminum and nickel (column 5, lines 8-13; column 7, lines 42-45).

Re claim 17: Iwaski discloses, in figure 1, the wiring for aiding the current supply line is formed on the front surface, on a back surface or in the interior thereof.

Response to Arguments

Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


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